

My A Ear Sur; Pinns Ellister & Cens from The Dissoo mean charles tim to The Saramork Bira, X inland Some 1500 20 miles. How much fautter inland I cannot say, but I am sum I never som it in the middle country. hor am I informed how for hook 4 cheta along the Dear coast Vil-Extens, - my Canty hurry I believe, Says, that he sawith in Horsoa. I suspect that the water is mulysay, for the fronte or Sustainer of this pine athat it will never be found very far from The Dear number to The Soil it offerts - It seems par -tral to no Textered Soil, as g find it in a among the Sand hills along Hillow Head beach - in Sandy cotton field lands about may given,

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved

and also in The damp - clay 2) Pineland about Har derille on the Sav. of Chather 11.18. It ponds" vry presuently, growing mitte P. Serotina. Dy have Seen acur of out field count soil on my Wire grown up &chusing en this pine, - the datelings now being 30 - 40 ft high , - but whally it is found in company with the pines along the road Live, Expérielly J. australis and P. Sentina. Except Therefore When it may happen to overoun an oed fires live the Follolly CP. (ceda) it always forms in company with with pines ox not in growter and groves. In the damp clay lands about the Sar achetin 17 Roting & think more abundant 11. australis with whit grows, & intimuley more so Than I'. Serotima Cwh is ont

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved

3 hus y P. australis. The usual Size of a true is & suppose 70 -80 (to 100 ft?) in height, and 2 feet or nure in diameter. The largest tree in guth I even sow I measured a day or two ago. It mar frum fruit outsite of a lupelo Swamp, but on the orching of a kime banen Sand ridge. It was not over 50 best height I think but 3 feet from the base et measured livelve feit (12) in cincumperence. But this is course Etremetz unusual. Its motes Etember for some 20 - 30th on the surface of the pearly -Sand Soil. I have sun one other true almost or stout on a hute Island in may Piver, but the takest trees are invain. aby found in wet or at least Jamp Cans. The finest and most typical him of Ell wh They were not tall ) I found

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved

4) froming in a arrive The Sand.

4) froming in a arrive of the Ribores,

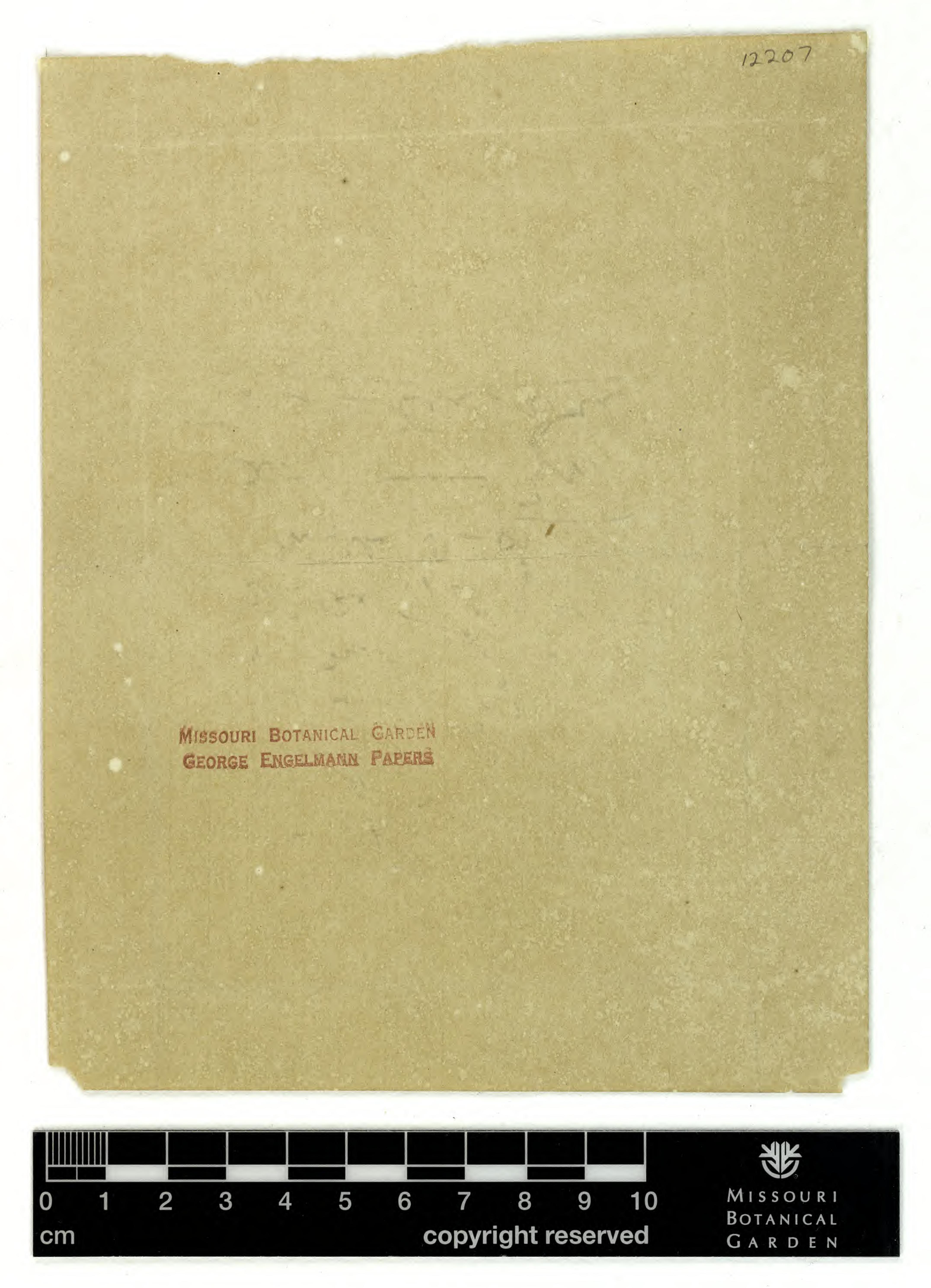
of hit a few yords from the beach. These sentimels are Toubles very old or have restled with many l a fale, but are unseather by winds or ago! I famey that om fuit narigaturs det Leans Ribault & Landonnien may have steened by them as the entered l'ort 1/07 ab! I believe I already comment Jon is & cellent tumber - the fibre much coarses than that of? australis but more tenacions I think. Turn what I my, - Delt have seen, as well as what others report to me is concluse that It & wo Es a much langer amt of Temperature Than anyother kine we har I need





(1) Time Ellotti, almit in full them ( made aments) while 7. australis (2) of (3) 1. 7 as a and hot com -2 of mothery of . It (4) = 7, Signal of the Luces to trucker K to Hour ! To Day while Stricing a blowing branch of P. Elli Att. It michance us ame puntity 772 the liter / 1/2 7 smith 1/2 aments They water. Live /L Juliela, N. 2007715 port with he supplied one milt the yelling the facture

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved



P. Elli Atir (Englan) Height - "70 To 130 feet high"! perhahr som Ha - mot Leve! From 50 7. 80 4 100 feet I wowed day, judjing from Spremens here. I never Saw one over 100 feet high, - a rather & showed Ray 109 beet from the ground to the Topmet branch. One cuta lying in the from - wh measured to voy-man 109 feet as above \_ measured with my walking stick; I don't Think I Even saw one lager! Usually much Smaller Man 7hrs. Thicknels of Back. I measured Serval trees - some of the litte stietes Devenues. Levenues Say from 1/2 inch to 1/4 inch - "snally I would say about % fan inch look 7.7.9.9/2.10.10/2 12.12 ling thick

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved



p. 2. Pinns australes, also with (1096 rosepurble florrers comes next " 10 1. Emile of No, Iwould say, "Pinus autrolis, also mit vou purple flowers Comes nept, with P. Toda, rest, 1. Stabra 1. P. milie, and lastly P. ngiva - var. Senotina mtt freenist zellen flowers! Lam sure That P. Serotina is the latest y all by far. (Su oer memorandum un lear Jemeil eneloret - 18)1 a 2 Lithunge. p. 2, Common along the marker no". I would Day (as fiving a still peater range in location 1 Lablat \_ hus I don't /commenter ! Groning in and among sand-- hells near The Lea- beach of along The monther no The tattest trees are formed in wet soil or in this starter is honds, \_ the larger

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved

(109 biet) in Such situation

inth ?, Serolina ?? autholis

Eint near. no pine here has a come at all recembling that 1. Ellester ! Sentena is the one that approaches Are not the scales Some ? = what peenlier as heing & funtheit or Triblet hus The Back of? Ellister resembles much both in colour a composity at hemy lammoe some to the the total of that of !! australes - only On Ellist Azerved, it ex = = bolealis in muet larger ( My much) blakes. Men The outer laminoe exfoliate it grues the bank at a distance MISSOURI 6

copyright reserved cm

BOTANICAL GARDEN a bluist luke \_ more so than Paustralis, - an Thus ares heart some wood cultures and call !! Eller The "Blue Back Pine", - hut Thus name is not all comme. So far an I have observed The Trees new Salt water now Dry Santy Love Lave must linger leaves Kam dans on wes I com to say That I Larr erw Seen any sifferenn frant to Jean - (or 25) Elight,) im The abundanter The Time mast of this Expecial tree. Pretty much Her Zame ergyen - always I think about at! GEORGE ENGELMANN PAPERS Them. 7.C 7.LTe 18)9. MISSOURI

copyright reserved cm

BOTANICAL GARDEN

Tears - y - Searce - 109 11. 8. sticks. Bluffin ) by which were measured The Min 705 same nog og true 7.45. 218) 9. 22. Ell. Sp. 3 of young the an They tapped news.

Res Der 13th Strongelmann

Res Der 13th Standsvetor ~ Hami af ann to day rereal yours 1. Ellinttio, and as Compull an was Polite 1. mo, \_ hit , Seems purfeel so for ar I have any Townships Ville Tous leus ar Whurm, and I have nothing few correlius or mis wh I melow. His afternoon after wood more know boom with age, pute porte someten ?.

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved



getting Ming 2 mtts Sime Darley, who has been peclerny mo I walked und in to two to Examina Ku Carpert True \_ or sallen Talles T her who due seen in There ) sails. It has been cut lus Mon Min I think - but has not been Junchers Jue 11en. Leme In Mercuments Ce A an a accuration of december of the service of the MISSOURI 6 BOTANICAL copyright reserved cm GARDEN

refords the my hat been some incrusting Jesins upa Thum and busites, some suem so close to feller that 7 L mas impolsible for any BY Certain etter as 1. The either mo Leart - a Sep mors; \_ but I do not Thurk I am They Las out of may! mas The Test Dest



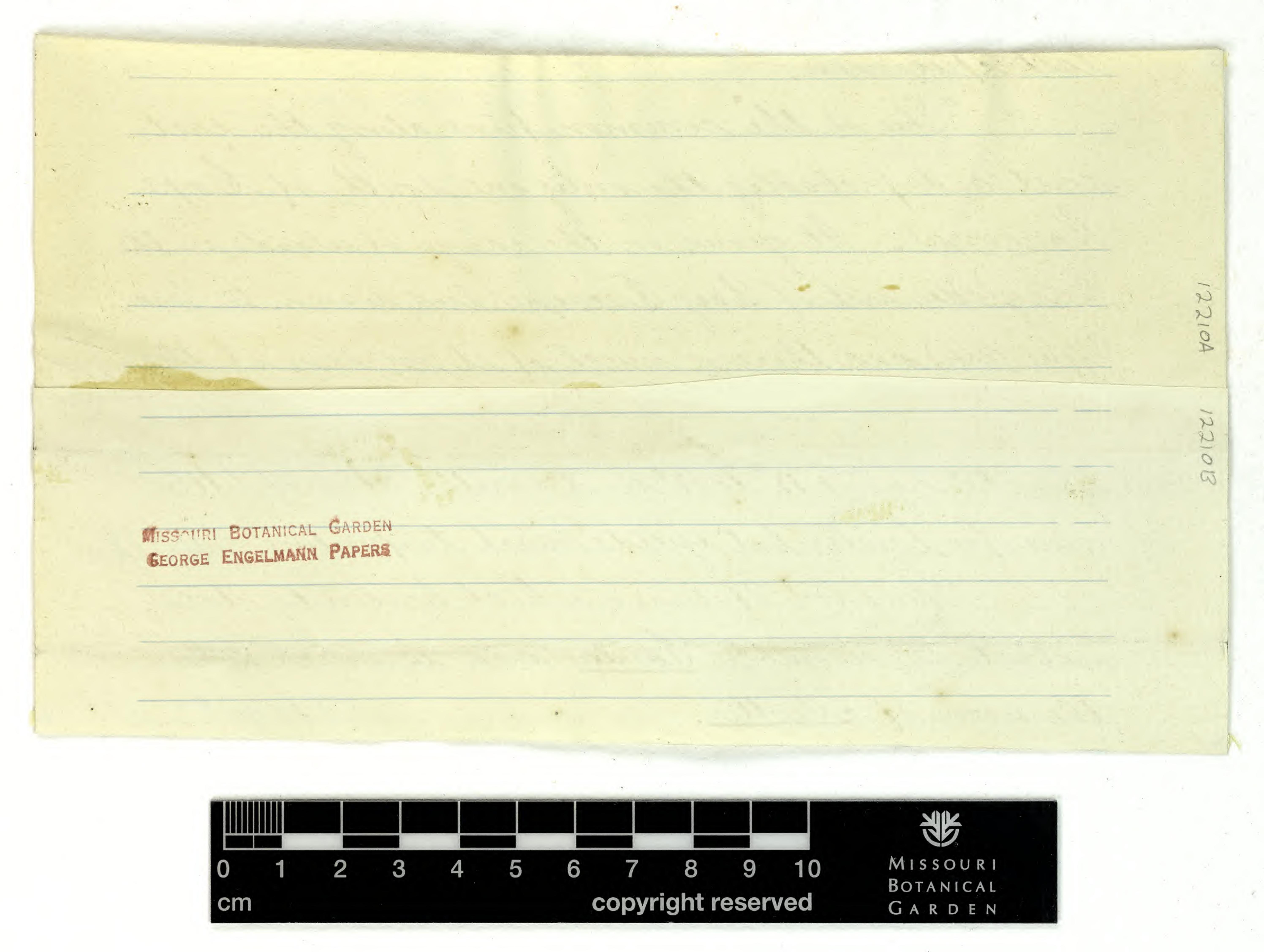


trev of P. Ellistin. Height. from ground to topmost bough Circumference from 3 feet from fround 11 (elevre) feet and lus (2) inches. Diameter from Back to Books inclusing, back in Sume places onf 3 feet - in Mers 3 ft 3-4 inches Diameter og Heart word\* 33-34 inches Width of Sap mood - from 2 To 4 weeks Rings getteat mood as mean as I cer come at il - about 140, mose Rings of Sapwood as near as 9 ces como al-il - about 50 - 60, mure en less. An all say 190 - 200 as the Bark - im some places 1 inch -to 11/4 inch. Leaves y this tree 7 3 inch only. I enclose a few also most - a fair Sample of Tree gram

0 1 2 3 4 5 6 7 8 9 10 cm copyright reserved


Last specimen, - Pinus Elliottis tubilis muonibus
"This is the common prine, along the last
coast and probably the only one south of Cape Canaveral. It grows on the range of islands in the Everglades west of Bay Biscayne (laid down on the Land Office map) and there is much of it on some of the Augs wist of Salia Honda - mone east. It grows 40°-60° high & 12 to 18'm diameter. It is of little value for lumber but spields much turpentine. AH Cutiss The wood specimen which he sends does not at all resemble Tarda and is much like the wood of Elliottic. CS largest 1880






Pinus Elliollei' Light much 1871 Times treds van Keterophylle 166 Tently & Mellichamp Come deprical - pedrudes elongatur Conir 4/2 inches Comp. 1 /4 Think vontes 5 & 8 sports product esperallythe Catter - 21/34 order more comes seen now (April 19) and all feter \$60/2 inches log, all 34 some with slander prickles others with start spines, seen about fig.

Seeds Thermelet - ridged on lower (scale -) side, almost entirely covered by wing on the upper circles (free) side tring free 3 times the leights of send, narrow, control in mille, Best strialete Cones sent lez De M. HW. Asvende eviter, march 16 1871, 3/2 - 7 intes long. "Hant " formon" fide de Mellichen, in a region which was very familiant Ellist, but Color mit; it to georgia more than I. Carol, says it flowers in April , & M. frus it (i This early sping) ead of Film i flow. Ful: Ellette sage the Pollen over puddle, i It city of Charleston and: At. early styl while all the others: fle i April. dougales that he dies not speak of the much of any other the but the I mellethamp writer; Comes wary a good deal is lengtte, of nich brown colour, and varnished appearance Edmund Ruffin i Aussel's arregazine on the Kash pine of M. Carolin, esperilly Alberrale Some. partly reported e. M. A Centi, in wrong plant of M. Caroline 1860 p. 22 mg 2-March 1871 & Medichay. Plan Vin ( Wester) calier the any other aments violet or me now dopping - all the tools ower I with polley P. Elliste 7-8 Cotyledy, sometimes 6 or 9 never more nor les MISSOURI BOTANICAL copyright reserved GARDEN



P. Alliottis', aligne tru 100-130 feel right 4-Comes 4/2-7 inches long. levers i 2' x 32 J-9 inches long. MISSOURI BOTANICAL copyright reserved GARDEN



Jims Ellisther

when my required formall pensistent bridge A lange true, 70-130 feet high, 2-4 feet in Bramotor, with this (how thick?) stay expoliating graysh frown bank in their lawning from bank in their lawning from bank with a things from bank on their lawning acutish closely semilate; rigid of the shouth at first about 3/1, and long effections. withered to half that length resin Such with the leaf itaternal; c. (1/2 ships log) in a short head (not more than 1 ship long) each surround by an short of about 12 scales, the a artistrough Realed ones half as less or less, It the showing, another with substraction Terrile aments mostly 2 - 4 Theyether preducted, is full event, les soon after flowing a suring a horizotte position and a little letter Cofee the leaves are much deaday i April or May becoming reflexed, the axis meanwhile clong eting and thering inmundates and rarely forming a record that of amounts - Leafburdles follows The aments and no naked, leafless (spece only bruit bearing) is observed above Them, a roudition which we find so often i Vikes hanny latent and to al comes ( co.g., ?? Moss. I signish all many thing), Scales of Ament broad, sounded Could stand recurred 3 - 6/2 us all 4 -5 inches long of a nich brown colour a cloud glassy from the sicher of land Smits Tribuse or emergents. apophysis maked with mility folds or grower, valisting from the slightly promised would programaly distant by a skap ridge, armed vitt a short stout proble. deeds trangular shat 2/2 to 3 /2 low, long, wing 4 or 5 times as long (18-16 ling to ) office with parallel eiger or I danale Broader town it charter. covering the greates part of the outen on upper sich ofthe



cotylish try would while J. Touch van heterophyth allioth Sketch 2.636 Common along the warshes near the months of the Nivers in light soul Dung seil, led else faul i day chang price lend and with the sent. infine barren prads in morely (avery explaying) smille brute and only as a served growth in old fields on from Let's Court Stablicking to Juny Ellat, (on the sea vilas men Charlester to georgin along the coast and panyly 15 to 20 miles , aland, but never very far from the Influence of Sell with, D'Millethamp, to groy Ellety and Horida, Carty Centin , the most commen friend. Hours there that the pine of the loss witter, taller more sleading with much harden wood then The Cong strees pine "Dauthelig Which with protonged forest true of caster mode as anthe Hord Def Of Jakon . - the cartiert flower fine of thon regions for 2-4 weeks of amondy to season in alreade of any others showing its rosepuple male flowing already in Derember greash gellow flower, Vian with latest being the latest of them The courseles meleure and drop off earlier them any other of the allied pier and show about the seed, which madily general and bylore the boysens of cold weather. The bracke is very chamber of the frame and I know for other speries ship with be company with it. If expoliates in lane, my their landing, which not flex ble lent retter britte laanse fared brown rolow, The bossites is excellent, hung; very longly, and more ses non erentte. O! autholis of a zellowshibrown Ves in colour, fitor courser the illauther, but were teasuren, andwittell that the tree grows with reporty ableast in it showed 8 p inter of hondowood, with 74 monant rigg, each on an avage more than 1/3 like wide, The sapwood of 2/2 inder Mohum complet 60-70 mags, or cech ten the /2 likes Wite. Sperker before me show the man hearthand 1-2/2 Gins with and these of the Tapwood for to I live witer.

plate. 1. fiz 1. a Bruk gather i Septante of frit under to showing 2 mature com, of the premis your, and 3 yay one, of the pring. One half untul Lize. 2, leave i 2' & 3' of satent Ligo 4-7 sections of leaves, mysexted 30 times, 4 & 5 of binte 6-x7 of ternote leaves, He duto are own plosely det appressed to The sheath which sund the viralen builty These are, as in most sky double, either separate on closely approach; I cloud writed, the but are write on smill, warms few on many, varying for 3 to 9. plats 2. 8. Male stylory ourse, capitale, with clought of flow in the axily of fraged scales. the 1. you of the flowers, magn. 3 his exhibiting the calyroist polem, Il 10 a don't and my, 4 2 1.1. # the involution from the donal & 12 from the ventel sike exhibiting the paint of brack, and the second in some ones. I 13 d'agram of the revolucion with the supports brust the 6 outer states we more on less keeled, the purilies Their phyllolatic arrangent at Peccapue orden is Sans reter. 14 a 10 faither for above as the site show the ones over and that so the start of the special of Mayor. 10 If 15. Jemile aments in bloom, the days of axis above the alocaly elongeling 16 the dame, a little more advance de 19 an amount magnified to the brown of shing the appear the blow after the confilty sale, and (nother classify) the openings of the bified overlay hebry may, 10. 19. femile aments, bouchs on 2 months later, recurred. I 30 one of these magnif.
Il 21-24 Cours of 2: ford riges and shaper, showing Their variability pradig stales exhibits the base 26-27.28 Solling a rome, 26 donal vins with the total a exhibit the apoplysis, 2%, outil view shows the impresses

copyright reserved GARDEN 

under ly the seed at the fla scenfung when you which the way has been detacled, 28 a with of the son with I rate seed (exhiby the early on I wing. IT 29 De Leeds for the lower, I so for the upper 2018 wings its much would shape wings its super state pully Timber Scripace, 31 x 32 album I ambyo Vinge. 4, 1 33. Hamiling seed in Morrely 34 the Same in the gallowing spiny exhibites the colylers The primary leaves I repaired alread the parts of seconds
The plates were drawn on Stom by Parlen Rocken to the plates plates plates plates plates plates plates it deport of the Fexan Mexico Balan Centre al cha has since greatly added to his unefalues a fame by his work is the prological Trobbet i Cabrille, M'SSOURI BOTANICAL GARDEN GEORGE ENGELMANN PAPERS MISSOURI BOTANICAL copyright reserved

GARDEN

p075-090 = 0.837-0.845 Collevin Heal) a lane Tree (100-120 ful hyl) 2-4 feel -Vinus Ellesthi". l'ameter, with This, souly, exfolishing nordonn buck, leaves in two and threes & If inter long purple with the stand of the light of the stand of the light of the long in a short head in intil inter the stand of the stand female aments flatent, pedulas, at first erect (people) but soon after flowing assuming a how just the soon because comes recurred, eval 3-6, who long the their about the property with the grown wife, and the state of the most transmit to the property to the following the state of the stat deeds whom him, by, wing the 4 this is by ( line) obtine, brown towns the best covery the outers out or upper site of the seed almost entirely. Collectus big mostly 2-8 Mittacker over , hetersplyll, Blest Milch on 2. 036 Canaly Contin Good the most some pour lath flood of the flood of the stand of the s Afthe woodnetting taller, more shall will much harden wood then the Colory Than of earlier, with the privaryl fred to of earlier, with the House, guil fl. K. I. Febr. earlier the any oth file, paligrand weeks in above of any other ine of that region Souther for your for the buch surly with D. awith it I hop day piùn Ca & onthe Savandon and i più bame par site ot. derting. ex rolled timber fiber roarser the authoris her more teacrions and page Comes mature and sort for earting the any other The unpl page BOTANICAL copyright reserved

GARDEN

cm

a Rep. 6.28 c. ic. 1857. 9. Long rubra Beuth. Ol. Hatter 327. 9. tintonia van Celifornira, Torrey Ost. Whipp. 138. 9. Sonomensis, Berth. a in St. Iros. l.c. 62 1864. Common from north to South with Coast ranges and also higher up on the western slope of the Lierras of the representative of The castern blackoaks, principally distinguished from them by the form of the deeps and the nut. Winterbudy 3 lives long, ovate, and est slightly ortrate states. The speries is for generally known as q. Sonomensis, but & Newheny's name, honoring the indefeligable bolevirel pioneen of California, par a priority of deven years. I this in to provided De Pod is vight and Benthamis name ers not publisher before 185% if to please alter) Seet, II. Androgyne ADC. Aments erect, pistillate below, staminate upwards or entirely staminate, stillanents many times longer than the very smill anthers; pollen only of mm in diam.; Itigmas linear; fruit bicamiel Ceaus persistent. 14. 9. densiflora, Alook, & Am. A mildesiges tree or show with mostly smoothish bash, tous tomentose branchlets, leaves oblong, acute, al base oblase or rarely arute, entire, out ourobte margias, or sometimes dentate, to mentoce, especially underneath, al lest glabratet and whitish, 2-4 on 5- sinches long 1/2-2 inship wite petioles 3-6 lines long, aments 4-6 inches long tomentose. flowers in glooperales of 3, supported by 3 bruits ; caly x of 5 broad worlly lobes, anther 10 acorns single or in short - ped unded dusters, cops very kallow 34-1/4 inches wite, count with long linear, rigid, rough, squence on spreading vocales, silky to mentore inside, but ord or oblong, acute or obline, 1-1/2 Hook Lung with very thick shell densely tomentore inside. Hook & An and Back. 391; 9. echinacea, For. But Wiff. 137 t. 19. fin Hartwegir ADO. From the Santa Luxia Mountains (& Palmer) through the East ranger and especially the Redwords to the Shasta region

copyright reserved cm GARDEN 2. Oh. Ellevithi. atre 22 inder N'est had 2 fe love of day a gh that hunder, Sapar. 60-70 mg, each ny let /4 lin with any heat was the right - buch that average in lines, age of the Lesperis from I five the iner my 72 2 h lis with all and for the Winder Alk Haus? wood Gill gettowith brown, resin rolowed, asset of Ellia questrales purple most the par greensh ans 9%" 7" It 12 felles - 3 years 20-26 0.75-09 Pollen 0.0. 0.04 l. (0.037-0.065) scales 2" by y "inve mot 13/mbs ( socrowed) persistence flewers: falling withe 3 Leason arbor migna costive temui lamellato vinere Laufich ligno dura Temiti resinoso, folis fornis Temisve, long, mibres (ox axili; brulearum finbrialanem paul persistentian), dentity
resinificais asgine internis; floribes mas ruli; clouding
i capitalem bowe congestis; amentis facemineis personality
lateral buss, max recurves; strobili; maj esculis apopleni misaline notela, enite trus vena d'midiate, innbone pula prominete, mucroned robusta orna to; desservites ala seminibus tringulantes quites, plunies longione, cotylents Lub. Ti

0 1 2 3 4 5 6 7 8 9 10

Copyright reserved

Output

Copyright reserved

There is notion all sweet of the speries Benth: Bot Sulph 55; 9. longiglanda Forn in Fremont geogramen.

9. Ransomi, Kellogg From Celif Ar 1.23. F Common Throughout The plains foot hills and velleys of the State e.g. about outland, in Anderson Welly, Sacraments Villey, on the plains of Mount Diable, north as fan as The origon line ( welling of the Collonwood creek, Bruser ), forther south higher of the insociation, e.g. near Tejon Pass (Kantus, Rothrock). - Amajustic Tree, sometimes 15-20 feet in girth Xlorewing 100 feet high, and with a widen sperced of branches (Porcever) which offer hang down to the ground. Back gray and thicky in all trees oft 4 or 5 inches thick, writerbeed oval, only about 2 ling long, processent on the edges of the bright brown scales, young leaves carescent on both sides. The wood is sæid to be brittle. Robbe of the Mexicans. 2. J. Garryana, Douglas. A large tree with thicker, mon nigit to mentose or paberrent branchlets and courser pliage; leavy 4-6 inches long, 2-5 wite on longish pelioles (1/2-1 inch) coansely lobe d-prinnetifie, lobes broad obliese on some lines acoutish, entire or again noteked on loved foull green above, strongly vetriculated, pale or zellowish, somewhat publing Edd underneatt, o alex Sviled into Zon & linear lanvolate ciliate lobes, anthers 6 2, acroms sessile or short pedended cups very shallow, with small landcolate slightly puberent for sometime, thicker with sinflated) scales, 1 - Hook. Hor. Bon. Am. 2. 159, 9. Neari nuts large (1/4-1/2 inthe long) oval, often venturose, obtuse. A common out of the lower country and in The valleys notti of Sa Francisco bay, Extending into Orogon and to the Virtight Columbia, where it is the only sak . A large tree Enoften 10-12 feet in corremperence and 60-70 feet high (Brever) Ja bark thinner there in less even in large trees only 1-1/2 inches Thick with hard, but it is said, brittle wood. Herterbudg The lang this species has often been confounded with the tast and the following species, but the thick strongly velice later leaves and especially the large landcolate densely to mentose writerbuds, 4-5 lines i length, really distinguity

copyright reserved CIII GARDEN



PINUS ELLIOTTII, Engelm.

P.Roetter from nat. on stone.

Print.by A.Meisel



copyright reserved

GARDEN

cm